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ABSTRACT

As part of the overall equal employment program, the Federal Women's Program was established, and annually examines areas of possible discrimination against women in Federal service. This series of reports analyzes the following: (1) the job series most used by HEW's several agencies, showing proportions of women regularly employed against the reservoir of those occupations in the national labor force; (2) the possibility of job discrimination in HEW in five different job series. Results indicate that HEW employs 11 percent of all women in the Federal Government, and that the 77,680 women employed in HEW constitute 62 percent of all the employees in the department. Women employees are a majority in the various agencies within the department except for the Center for Disease Control and the Food and Drug Administration. The low ratios in these areas can be justified because the jobs within these agencies are in scientific fields where women do not predominate. A study of employees in five job series in HEW concluded that the presence of women in these fields was more than adequate when compared to their availability in the labor force (except social workers). The report concludes that if women within HEW are to achieve further equality of employment, they must seek training in fields where they are currently under-represented. (Author/PC)

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STATUS OF WOMEN AT HEW

THE HISTORY OF WOMEN IN THE FEDERAL GOVERNMENT DATES BACK TO 1773, WHEN A WOMAN POST MISTRESS WAS APPOINTED IN A TOWN NEAR BALTIMORE, MD. SHE WAS OVER-QUALIFIED, AND WAS HIRED AT 50% OF THE SALARY PAID TO MEN FOR THE IDENTICAL SERVICE.

SMALL ADVANCES WERE MADE THROUGH THE 19TH CENTURY. BY 1883 THE CIVIL SERVICE ACT PERMITTED WOMEN TO COMPETE FOR POSITIONS. THE FIRST WOMAN APPOINTED RECEIVED THE HIGHEST SCORE ON THE TEST...AND THE SECOND APPOINTMENT. THE FEELING TOWARDS WOMEN IN FEDERAL EMPLOYMENT IS REFLECTED IN A STATEMENT MADE IN 1893 BY THEN CIVIL SERVICE COMMISSIONER, THEODORE ROOSEVELT:

> "The sole discretion whether men or women shall be appointed rests with the appointing officer. But...most appointing officers seem to prefer men."

THE 20TH CENTURY WAS 23 YEARS OLD WHEN THE CONCEPT OF EQUAL WORK FOR EQUAL PAY WAS ESTABLISHED BY THE CLASSIFICATION ACT OF THAT YEAR.

DURING THE 2 WORLD WARS, WOMEN IN THE GOVERNMENT WERE EMPLOYED AND SUCCESSFULLY ACCOMPLISHED THOSE TASKS THAT WERE PREVIOUSLY RESTRICTED TO MEN. THEY HAD PROVEN THAT WOMEN COULD EFFECTIVELY PARTICIPATE IN CARRYING OUT THE BUSINESS OF GOVERNMENT AND DID SO DURING ONE OF THIS NATION'S GREATEST CRISES.

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BUT PARTICIPATION HAS NOT BROUGHT EQUALITY AND IT WAS NOT UNTIL THE LATE SIXTIES WHEN THE NEW INTEREST IN THE CIVIL RIGHTS MOVEMENT IN GENERAL AND THE WOMEN'S MOVEMENT IN PARTICULAR BROUGHT ATTENTION AGAIN TO THE EXISTING INEQUITIES IN THE EMPLOYMENT OF WOMEN IN THE FEDERAL GOVERNMENT. THE PROHIBITION OF DISCRIMINATION IN EMPLOYMENT BASED ON SEX WAS ADDED TO EXECUTIVE ORDER 11478, THE FEDERAL WOMEN'S PROGRAM WAS ESTABLISHED AND INTERGRATED INTO THE OVERALL EQUAL EMPLOYMENT PROGRAM. FINALLY, IN 1972 PUBLIC LAW 92-261 STATED THAT:

> "All personnel actions affecting employees or applicants for employment...shall be free from any discrimination, based on race, color, religion, sex or national origin."

WHAT HAS THIS MEANT? WHAT ARE THE WOMEN IN GOVERNMENT DOING? WHAT TYPES OF WORK ARE THEY INVOLVED IN? HAS A CHANGE IN LAWS AND IN GENERAL ATTITUDES OF PEOPLE MEANT CHANGE IN THE GENERAL EMPLOYMENT CHARACTERISTICS OF WOMEN IN THE FEDERAL GOVERNMENT?

THE DEPARTMENT OF HEW OFFERS A SUITABLE CASE STUDY. IT EMPLOYS 11% OF ALL THE WOMEN IN THE FEDERAL GOVERNMENT. WOMEN ARE EMPLOYED IN 210 OCCUPATIONS RANGING FROM SECRETARIES TO SOCIAL SCIENTISTS AND FROM MATHEMATICIANS TO PHYSICISTS.

THE 77,080 WOMEN EMPLOYED IN DHEW CONSTITUTE [illegible]% OF ALL THE EMPLOYEES IN THE DEPARTMENT. THE AVERAGE GRADE OF WOMEN IN THE DEPARTMENT IS 5.9. THE AVERAGE GRADE OF MEN IS 9.6

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A GAP OF 3.7 GRADES. IT IS HEARTENING TO KNOW THAT AS OF JUNE 30, 1972 THE GAP IN THE AVERAGE GRADES OF MEN AND WOMEN IN THE DEPARTMENT WAS 3.9 GRADES.

WOMEN EMPLOYEES ARE A MAJORITY IN THE VARIOUS AGENCIES WITHIN THE DEPARTMENT EXCEPT FOR THE CENTER FOR DISEASE CONTROL (CDC) AND THE FOOD AND DRUG ADMINISTRATION (FDA).

A RECENT STUDY[1] PUBLISHED BY THE FEDERAL WOMEN'S PROGRAM REVEALED THAT WOMEN ARE UNDER-EMPLOYED IN THE LARGEST SERIES IN CDC, PUBLIC HEALTH ADVISOR. ONE OUT OF EVERY 4 EMPLOYEES IN CDC IS CLASSIFIED IN THIS SERIES, ONLY 15 ARE WOMEN. AN EXAMINATION OF THE CLASSIFICATION STANDARDS FOR THIS SERIES SHOWS THAT THE PREREQUISITES FOR EMPLOYMENT ARE IN FIELDS WHERE WOMEN ARE MORE THAN AVAILABLE.

NEARLY 2 OUT OF EVERY 5 EMPLOYEES IN FDA ARE WOMEN. THE LOW RATIO CAN BE JUSTIFIED BECAUSE 7 OF THE 12 LARGEST SERIES IN THE AGENCY ARE IN SCIENTIFIC FIELDS WHERE WOMEN DO NOT PREDOMINATE. FDA EMPLOYS MORE WOMEN IN 6 OF THESE FIELDS THAN THE LABOR FORCE WOULD ALLOW.[2] IN 1 SERIES, CONSUMER SAFETY OFFICER, THE PERCENTAGE OF WOMEN HAS INCREASED BY 5% IN 2[illegible] MONTHS.

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[1] The Employment of Women in CDC, An Occupational Analysis, [illegible], February 1974

[2] The Employment of Women in FDA, An Occupational Analysis, Oct. 1971, Oct. 1972 & Dec. 1973, FWP, January 1974

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IN DHEW AS A WHOLE WOMEN ARE EMPLOYED IN 87% OF THE 252 OCCUPATIONS UNDER WHICH EMPLOYEES ARE CLASSIFIED.[3] THE SERIES IN WHICH THERE ARE NO WOMEN ARE RELATIVELY SMALL, NONE HAVING MORE THAN 55 EMPLOYEES. SEVEN OF THE 32 SERIES IN WHICH THERE ARE ONLY MEN ARE IN ENGINEERING FIELDS, AGAIN AN AREA WHERE THE PRESENCE OF WOMEN IS MINIMAL.

THE MEN ONLY JOB SERIES HAVE AN AVERAGE GRADE OF 9.7. THE AVERAGE GRADE IN THE 16 SERIES WHERE ONLY WOMEN ARE EMPLOYED HAVE AN AVERAGE GRADE OF 7.8.

LESS THAN .5% OF THE EMPLOYEES IN THE DEPARTMENT ARE CLASSIFIED IN ONE-SEX SERIES. BUT THEIR EXISTENCE POINTS OUT VERY CLEARLY TO THE STEREO-TYPING IN THE SELECTION OF PROFESSIONS BY MEN AND WOMEN: MEN ARE ENGINEERS, BUILDING AND GROUND MANAGERS, CRIMINAL INVESTIGATORS, WOMEN ARE CLERKS, LIBRARIANS, OCCUPATIONAL THERAPISTS AND DENTAL HYGENISTS.

FORTY-FIVE JOB SERIES IN DHEW ARE COMPARABLE TO OCCUPATIONS IN THE 1970 U.S. CENSUS.[4] HEW EMPLOYS MORE WOMEN THAN THE LABOR FORCE AVAILABILITY WOULD ALLOW IN 28 OF THE 45 SERIES (62%). IN 4 OF THE 17 SERIES WHERE WOMEN ARE UNDER REPRESENTED THE SHORTFALL IS MINIMAL,(LESS THAN 2.0%).

DURING THE SUMMER OF 1973, THE FEDERAL WOMEN'S PROGRAM CONDUCTED A SURVEY OF EMPLOYEES IN 5 JOB SERIES IN THE DEPARTMENT TO DETERMINE IF THE DIFFERENCE IN THE GRADES OF

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[3] HEW's 48 One-Sex Series, FWP, June 1974

[4] Presence of Women in DHEW in Occupations Comparable to U.S. Census Statistics, Oct. 1971, Oct. 1972, Dec. 1973

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MEN AND WOMEN WAS RELATED TO DIFFERENCES IN EXPERIENCE AND EDUCATION. THE SURVEY INCLUDED PSYCHOLOGISTS, SOCIOLOGISTS, SOCIAL WORKERS, MATHEMATICIANS AND STATISTICIANS.[5]

THE STUDIES CONCLUDED THAT THE PRESENCE OF WOMEN IN THESE FIELDS WITHIN DHEW WAS MORE THAN ADEQUATE AS COMPARED TO THEIR AVAILABILITY IN THE LABOR FORCE (EXCEPT SOCIAL WORKERS). RECOMMENDATIONS WERE MADE TO EXAMINE THE RECRUITMENT PATTERNS FOR WOMEN PSYCHOLOGISTS AND MATHEMATICIANS WITH GRADUATE DEGREES. THE STUDIES ALSO FOUND THAT WOMEN COULD ACCELERATE THEIR PROMOTION POSSIBILITIES IF THEY CONCENTRATED THEIR TRAINING EFFORTS ON COMPLETING ADVANCED DEGREES. ONLY MALE SOCIAL WORKERS IN THE REGIONS WERE FOUND TO HAVE A HIGHER PROMOTIONAL RATE THAN WOMEN NOT JUSTIFIABLE BY DIFFERENCES IN EXPERIENCE AND EDUCATIONAL BACKGROUNDS.

WHERE WILL WOMEN BE IN HEW IN THE FUTURE? THEY ARE RECEIVING TRAINING. FIFTY-THREE PERCENT OF THE WOMEN IN DHEW RECEIVED TRAINING DURING FY73. WOMEN AT ALL GRADE LEVELS PARTICIPATED IN TRAINING AT HIGHER RATIOS THAN THEIR PROPORTION IN THE WORK FORCE.

WOMEN ARE MOVING AWAY FROM THE SECRETARIAL POSITIONS. ONE SECRETARY IN 37 MOVED TO A DIFFERENT JOB SERIES DURING A [illegible] MONTH PERIOD. SIXTY OF THE 200 JOBS WERE CREATED THROUGH "JOB RESTRUCTURING." A PROGRAM EXISTING IN THE DEPARTMENT FOR EMPLOYEES IN DEAD-END POSITIONS (WHO ARE MOSTLY WOMEN.) THE

[5] Give "[illegible] Discrimination:" Mathematicians, Sociologists Psychologists [illegible] & Statisticians, Comp. - Nov. 1973

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REMAINDER WERE CREATED THROUGH EFFORTS OF BOTH PERSONNELISTS AND SUPERVISORS.

PROMOTION RATES SHOW THAT MORE WOMEN ARE BEING PROMOTED THAN MEN.[6] DURING CALENDAR YEAR 1973 1 WOMAN IN 4 WAS PROMOTED, 2 MEN IN 11.

THE AVERAGE GRADE OF MEN ACCEDED INTO DHEW BETWEEN JANUARY 1973 AND APRIL 1974 WAS 5.9. WOMEN ACCEDED DURING THAT PERIOD HAD AN AVERAGE GRADE OF 3.7, A GAP OF ABOUT 2.2 GRADE LEVELS. THE EXISTING GAP IN THE DEPARTMENT WAS 1.5 GRADE LEVELS HIGHER.

IT IS INTERESTING TO NOTE THAT NO WOMEN APPLIED FOR 40% OF THE VACANCIES OCCURRING AT THE GS-13-15 LEVELS IN THE OFFICE OF THE SECRETARY DURING THE PAST 22 MONTHS.

WOMEN, IT APPEARS ARE STILL SHY. THEY FEAR THAT SEEKING HIGHER CAREER LEVELS IS PRESUMPTUOUS. THE 48 VACANCIES I HAVE MENTIONED ABOVE WERE ALL ANNOUNCED, WOMEN WERE 17% OF THE APPLICANTS AND 15% OF THE SELECTEES. THESE POSITIONS WERE NOT IN FIELDS WHERE "THERE ARE NO WOMEN."

IF WOMEN WITHIN DHEW, AND WE CAN ASSUME THAT THE SAME HOLDS ELSEWHERE, ARE TO ACHIEVE EQUALITY OF EMPLOYMENT, THEY MUST SEEK TRAINING IN FIELDS INTO WHICH THEY HAVE NOT PREVIOUSLY ENTERED IN LARGE NUMBERS. THEY MUST SEEK THE BEST TRAINING AVAILABLE WITHIN THEIR CHOSEN FIELDS. THEY MUST STOP BEING SHY. THEY MUST LEARN TO DARE.

6/"[illegible] of Being Promoted Against the Chances of [illegible]," May 19[illegible], 19[illegible]

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THE NEED FOR EQUALITY OF OPPORTUNITY EXISTS, THE LAWS EXIST. SOCIETY MUST ALLOW IT TO HAPPEN. THE BARRIERS THAT WOMEN PUT UP MUST BE CRUMBLED AS MUST THE BARRIERS THAT SOCIETY CREATES. SUPERVISORS MUST ALLOW WOMEN TRAINING OPPORTUNITIES, WOMEN MUST SEEK THEM. SELECTING OFFICIALS MUST SELECT WOMEN TO POSITIONS FOR WHICH THEY HAVE APPLIED AND QUALIFY; WOMEN MUST SEEK THESE OPPORTUNITIES.

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NO CONVERSATION ON THE STATUS OF WOMEN CAN BE COMPLETE WITHOUT SPECIFIC MENTION OF THE STATUS OF MINORITY WOMEN. WOMEN AND ALL MINORITY GROUPS ARE WELL REPRESENTED WITHIN DHEW (EXCEPT FOR SPANISH SPEAKING WOMEN). THE GAPS BETWEEN THE AVERAGE GRADES OF MEN AND MINORITY WOMEN VARY, RANGING FROM 2.9 GRADES FOR ORIENTAL WOMEN TO 5.9 GRADES FOR ALASKAN WOMEN.* WITH THE EXCEPTION OF THE GAP FOR BLACK WOMEN, ALL GAPS NARROWED, during FY 73

*GAP FOR BLACK WOMEN..... 4.3 GRADES
GAP FOR SPANISH SPEAKING WOMEN..... 4.5 GRADES
GAP FOR NON-MINORITY WOMEN.....3.3 GRADES
GAP FOR AMERICAN INDIAN WOMEN.....5.0 GRADES

HEW's 48 ONE-SEX JOB SERIES*

An examination undertaken at the suggestion of the Under Secretary

Federal Women's Program
June 1974

* *data: December 1973*

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° HEW employs workers in 252 different occupations. *(page 2)*

° In 81% of these, HEW employs both men and women.

° In 13%, it employs only men. In 6% it employs only women.

° The one-sex occupation is becoming obsolete in the national labor market. But in HEW the number of one-sex occupations has increased in the 26-month period studied.

Men-only occupations increased from 28 to 32. *(page 2)*

Women-only occupations increased from 9 to 16.

° One-sex job series are generally small. None involves more than 55 employees. For women's series, the average is 9 employees. For men's, the average is 14 employees. *(page 5; page 4)*

° Men-only series are not only larger in the number of employees, they also have higher grades. At grades above GS-8, 72% of men-only series are found. Women-only series show only 31% above GS-8.

Average grade for men-only series is 9.74; for women-only series, average grade is 7.8. *(page 4; page 5)*

° Hiring patterns in some agencies produce more one-sex series than they do in other agencies.

NIH is a major employer in 26 one-sex series. ADAMHA and OE show only one each. NIE and SRS show none. *(page 6)*

HSA is second to NIH; it shows 14 one-sex series in which it is a major employer.

Data on page 6 reflect only one-sex series shared by agencies with all of HEW. Hence, the totals are minimal, for each agency has one-sex series unique to itself, not listed here because they employ people of both sexes in other agencies.

Occupations*in DHEW with Both Men and Women, with Only Men or Only Women, over 3 years

	October 1971		October 1972		December 1973		26 Month Change	
	#	%	#	%	#	%	#	%
Number of Occupations	232	100.0	238	100.0	252	100.0	+20	
Men and Women	195	*84.0*	191	*80.2*	204	*80.9*	+9	*-3.1*
Men Only	28	*12.1*	33	*13.9*	32	*12.7*	+4	*+.6*
Women Only	9	*3.9*	14	*5.9*	16	*6.3*	+7	*+2.4*

**occupations with more than one employee*

DHEW Job Series Having Men Only

Series	Number of Employees October 1971	October 1972	December 1973	Average Grade 1973	Major Employer
001 Trades/Crafts	8	x	x		NIH
007 CorrectionalOfr		22	25	5.5	NIH
018 SafetyMgt	10	13	x		OS,HSA,FDA,CDC
020 UrbanPlan'g	x	5	4	13.8	OS,ADAMHA
060 Chaplain	17	19	19	11.8	NIH,HSA
081 FirePrevention	39	x	36	5.6	NIH
142 ManpowerDevlpmt	x	13	x		OE,ADAMHA
170 History	4	4	4	14.5	NIH
414 Entymology	x	x	24	11.7	FDA,CDC,NIH
434 PlantPathology	x	2	2	13.0	FDA
437 Horticulture	3	3	2	10.5	NIH
625 AutopsyAsst	10	11	12	4.7	HSA,NIH
637 ManlArtsTher	4	1*			
650 MedTechAsst	x	5	x		
667 Orthotist	3	3	3	6.0	HSA
680 DentalOfficer	24	23	x		FDA,HSA,NIH,HRA
688 Sanitarian	14	17	18	10.9	HSA,FDA,NIH
803 SafetyEngr	6	9	7	14.1	OS,CDC
807 LandscapeArch	3	3	3	11.0	NIH
809 ConstructControl	42	54	55	6.3	HSA
810 CivilEngr	x	98	x		NIH,FDA
817 SurveyTech	3	3	4	4.5	HSA

continued.....

Men-Only Series, continued

819 SanitaryEngr	8	6	5	13.2	HSA
850 ElectriclEngr	x	24	23	12.3	OS,NIH,FDA
855 ElectronicEngr	35	52	45	11.9	NIH,FDA,HRA, CDC,
856 ElectronicTech	98	102	x		FDA,ADA,CDC,HSA
893 ChemicalEngr	x	21	17	11.1	FDA,NIH,CDC
896 IndustrialEngr	x	x	10	12.4	FDA,OS
1010 ExhibitSpec	x	x	3	9.7	NIH
1071 AudioVisProd	25	24	x		NIH,HSA,SSA,SRS
1103 IndustPropAid	4	10	9	10.4	NIH,OS,OE
1382 FoodTech	8	x	x		
1397 DocumentAnalysis	2	2	x		
1640 FacilityMaint	13	11	12	11.3	HSA,NIH
1641 BldgGrdsMgt	54	51	47	11.5	HSA,NIH
1670 EquipmtSpec	12	11	13	9.7	NIH
1715 VocRehab	5	3	3	10.7	HSA
1810 GenlInvestigator	x	x	12	13.0	SSA,OS
1811 CriminalInvest	1*	2	15	12.8	OS,SSA
1960 QualInspect		1*	2	8.0	
2040 GenlSupplyClk			3	3.3	NIH
2091 SalesStoreClk	2	3	7	5.3	NIH
2134 ShipmtClk	x	x	2	5.0	
2151 Dispatching	5	3	x		NIH
Total series	28	33	32		
Number of Employees	463	629	446		
Average per series			14		
Average grade				9.74	

* one-person series not included in count for the period
x series employing men and women at the time

DHEW Job Series Having Women Only

Series	Number of Employees October 1971	October 1972	December 1973	Average grade (73)	Major Employer
102 SocSciAide/Tech		13	x		SRS
106 UnemploymtInsp	x	x	2	12.5	OS
204 MilitaryPersClk	x	20	14	6.36	OS,HSA,NIH
319 MicReporter	3	2	2	5.5	
324 Cold-TypeComp	10	8	4	5.3	SSA
351 PrintingClk	12	10	7	5.4	NIH,CDC
354 BookpingMachOpr	3	1*			
392 GenlCommun		x	3	4.3	OS
394 CommunClk	10	11	12	4.8	SSA,NIH
493 HomeEcon	11	9	5	9.0	HRA
590 Time/LvClk	42	43	x		OS
599 AcctStudTrnee	x	2	x		
631 OccupTherapist	32	29	28	10.0	NIH,HSA
669 MedicLibrarian	x	51	46	9.6	HSA,NIH
682 DentHygienist	x	9	14	5.4	HSA,NIH
963 LegalInstExam	x	x	5	7.2	FDA
988			4	4.8	HSA,SSA
996 VetClmsExam	3	x	3	8.3	SSA
1047Interpreter		2	x		
1173Housing	1*	2	2	7.0	
1667Steward	x	x	3	5.3	NIH
Total series	9	14	16		
Number employees	135	225	154		
Average per series			9		
Average grade				7.8	

* one-person series not included in count for the period
x series employing men and women at the time

Major Employers of One-Sex Series in HEW (December 1973)

	OS	OE	HSA	SSA	SRS	FDA	HRA	NIH	CDC	NIE	ADAMHA
MEN	020 803 850 896 1103 1810 1811	1103	060 625 667 688 809 817 819 1640 1641 1715	1810 1811		414 434 688 850 855 893 896	855	007 060 081 170 414 437 625 688 807 850 855 893 1010 1103 1640 1641 1670 2040 2091	414 803 855 893		020
WOMEN	106 204 392		204 631 669 682	324 394 966		963	493	204 351 394 631 669 682 1667	351		
Total	10	1	14	5	0	8	2	26	5	0	1

PRESENCE OF WOMEN IN DHEW IN OCCUPATIONS

COMPARABLE TO U.S. LABOR FORCE

CG 009 273

Federal Women's Program

August 1974

Forty-five job series in DHEW are comparable to occupations in the U.S. labor force. HEW employs more women than the labor force availability would allow in 28 of the 45 series (62%). In four of the 17 series where women are under represented, the short fall is minimal (less than 2.0%).

The two largest short falls are in Office Machine Operators and Calculating Machine Operators. These two series are low graded and have traditionally been occupied by women. Eight of the 17 series where there is a short fall of women are fields where women predominate.

Fifteen of the twenty-eight job series in which DHEW employs more women that the labor force would allow are in fields that women have not entered in large numbers.

PRESENCE OF WOMEN IN [redacted] IN OCCUPATIONS
COMPARABLE TO U.S. LABOR FORCE

Job Title	% in US Labor Force	10/71	%in MEN Labor Force 10/72	12/73	
Guard	5.1	3.8	3.8	3.9	-1.2
Economist	11.2	27.4	22.4	25.0	+13.8
Psychologist	38.2	28.2	26.5	26.2	-12.0
Sociologist	35.4	22.2	38.1	34.8	- .6
Recreation	41.0	48.3	53.8	60.7	+19.7
Messenger	19.8	32.0	34.1	37.9	+18.1
Mail & File Clerk	71.7	72.1	70.8	70.4	- 1.3
Clerk/Steno	93.7	99.3	99.4	99.3	+ 5.6
Secretary	97.6	99.3	99.5	99.4	+ 1.8
Clerk/Typist	94.2	96.4	95.8	96.5	+ 1.3
Computer Specialist	19.6	24.2	24.2	23.1	+ 3.5
Off. Machine Operator	73.7	43.5	39.1	38.3	-35.4
Bookeeping Machine Opr.	89.4	100.0	100.0	-	
Calculating Mach. Opr.	91.3	33.3	50.0	33.3	-58.0
Card Punch Operator	56.9	97.2	96.1	96.1	+39.2
Telephone Operator	94.5	99.2	98.2	95.4	+ .9
Biology	34.9	50.3	50.1	48.4	+13.5
Accounting	26.0	6.6	6.4	7.1	-18.9
Accounting Tech.	81.9	82.5	81.7	78.8	- 3.1
Physicians	9.2	17.3	16.1	17.0	+ 7.8
Nurse	97.3	98.2	98.4	98.2	+ .9

continued.....

Nursing Assistant	84.8	72.4	74.1	78.2	-6.6
Dietician	92.0	98.8	98.6	96.9	+4.9
Radiology Tech.	31.6	48.0	46.6	45.7	+14.1
Pharmacist	11.9	5.9	4.8	11.1	- .8
Medical Records Lib.	92.1	96.4	100.0	100.0	+ 7.9
Dental Assistant	97.9	96.7	97.5	98.0	+ .1
Dental Hygienist	94.6	90.9	100.0	100.0	+ 5.4
Dental Lab Tech.	22.6	4.6	2.3	2.5	-20.1
Architect	3.5	6.1	3.2	6.3	+ 2.8
Engineer Draftsman	7.8	20.0	26.3	21.1	+13.3
Mechanical Engineer	.9	1.7	2.6	1.6	+ .7
Industrial Engineer	3.0	11.1	8.3	-	- 3.0
Attorney	4.7	15.9	16.7	18.7	+14.0
Photography	13.8	8.6	8.7	9.0	- 4.8
Writing and Editing	40.4	76.3	72.8	77.4	+37.0
Purchasing	29.5	81.5	76.2	73.3	+43.8
Physics	3.9	2.3	2.0	5.1	+ 1.2
Chemistry	11.9	28.2	27.6	26.7	+14.8
Librarian	81.9	66.5	66.9	65.1	-16.8
Library Technician	78.9	66.1	66.9	68.0	-10.9
Actuary	23.2	16.7	9.7	11.4	-11.8
Mathematics	22.5	41.9	34.1	30.6	+ 8.1

continued.....

Math Technician	11.9	75.0	66.7	50.0	+ 38.1
Statistician	40.8	35.5	35.0	33.7	- 7.1
Statistical Asst.	64.3	91.2	91.1	91.1	+ 26.8
Total	46	46	46	45	

Source: US Census of the Population, 1970

The Employment of Women in CDC

An Occupational Analysis

The Federal Women's Program will analyze annually the job series most used by HEW's several agencies, showing proportions of women regularly employed against the reservoir of those occupations in the national labor force.

HEW AAP II-F-1

Federal Women's Program
February 1974

Source: HEW Personnel Data System, December 31, 1973

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In the United States, two workers out of five are women.

In HEW, two workers out of three are women.

But in CDC, a newly independent agency within HEW, only one worker out of three is a woman - the lowest ratio in HEW. 1/

Moreover, women employees in CDC work at an average of 3.70 grades lower than men.

This examination of job series within CDC attempts to discover whether occupational distribution and labor-force availability of women contribute to their low numbers and low average grade.

1. One-sex occupations

CDC employs workers in 88 different occupations.2/ But in 68 of these there are no women. Twenty-three percent of the occupations of CDC are male-only. *(page 5)*

That women are available in these fields is attested by the fact that other HEW agencies employ women in all but four of the 20: entymology, safety engineering, electrical engineering and chemical engineering.

HEW agencies have employed women as entymologists and electrical engineers in the past three years.

However, the 20 all-male occupations in CDC account for only 85 of its employees, about 3%. Hence, although one-sex occupations are becoming obsolete, the relatively low proportion of women in CDC cannot be attributed to these 20 occupations.

Women-only occupations in CDC number 13, and account for 293 (11.3%) of CDC's employees. *(page 6)*

Of the 13, at least 8 are the traditionally "women's jobs": clerk/steno, clerk/dictating machine, secretary, cardpunch operator, nurse

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1/ When all pay systems are included, CDC has 33.7% women. For the GS pay system only, CDC is second lowest in HEW in its ratio of women.

2/ with more than one employee

and the like. Hence, the approximate third of CDC's women clustering in the traditional low-paid women's jobs could contribute to the overall lower grade-level for women.

2. CDC's jobs and the national labor market

Like most of the government, CDC's job titles are specialties which do not conform to U.S.Census titles. Of the 88, 28 only can be found to match. *(page 7)*

Within the 28, CDC exceeds the national proportions of women in 16. Most notable excesses are found in computer specialists, biologists, accountants (unusual for the government!), mechanical engineers, writing/editing, purchasing, chemists, and statistical assistants.

In 12 of the titles, CDC falls short of availability nationally. Most of the numbers are so small as to have little significance. Moreover, the total number of employees in the shortfall titles is only 75, less than 3% of CDC's workforce. *(page8)*

Hence, CDC's low numbers of women cannot be attributed to the deficits shown in this list, although CDC might ask itself for an explanation of the deficits when most of HEW does not have them.

3. CDC's most populous job series, and ratios of women

Of CDC's 88 job series, 14 have more than 27 workers. These 14 comprise about 75% of CDC's employees - 76% of its women and 73% of its men. *(page 9)*

Eight of these have less than half women. Five have less than 30%: computer specialist, administrative officer, public health program specialist, chemist, and quarantine inspector.

Two have less than 3% women: GS-685 and GS-1864.

When these 14 predominant job series are compared with those in the former mother-agency of CDC, 8 of them are seen to have decreased proportions of women in CDC. Losses of 5% or more of women are found in administrative officers, public health advisor/analysts, chemists, statisticians, and computer specialists. Except for GS301 and GS1531, the gains are much smaller than the losses.

4. CDC's most populous job series, and average grades of women

In the 12 series where both men and women are employed, the average grade of men is universally higher than that of women. *(page 10)*

Even in those two series where women have always predominated in numbers (GS322 and GSI531), the men in CDC surpass the women!

The widest gaps in grade level are found in general clerk, computer specialist, administrative officer, public health advisor/analyst, statistician - all two and a half grades higher. General clerk (GS301),being the "basket series" it is,can possibly be explained rather simply; but the other series differentials are harder to explain.

In addition, 6 of the occupations show a widening of the grade level gap when CDC's figures are separated from HSMHA's. And the greatest widening occurs in two of the series where ratios of women decreased (computer specialists and public health advisors/analysts).

Cumulated average grade losses for the 12 series total 10.7 grades. Cumulated average grade gains total 2.0 grades. Hence, the losses are more than 5 times the gains, for women.

5. Specimen occupation

As an impressive example of an occupation where women show a deficit in CDC, there is GS685, Public Health Advisor/Analyst. In this occupation there are 584 men and 15 women (2.5%). This job series comprises 23% of CDC's employees.

Two out of every 5 men in CDC is a public health advisor/analyst. One of out 75 women is in this series - only 1.3%.

In 1971 and 1972, HSMHA showed 8.9% and 10.7% women in the series.

In all of HEW in 1973, 12.3% of the Public Health Advisor/Analysts were women. In agencies other than CDC, there were 542 PHAs; 23.2% of them were women.

The X-118 Qualification Standards for PHAs in CDC set up no obstacles to the recruitment of women. In fact, a major in social sciences, psychology or liberal arts should net a preponderance of candidates who are women. The specification of "superior learning ability" for GS-7 entrants, as opposed to GS-5 entrants, should pose no obstacle for women, nor should any of the specified fields of interest. Nor, for the GS-12 or above, should a transfer of administrative skills from rehabilitation or public welfare programs be prohibitive to women.

Once in the service of GS685, women achieve in CDC an average grade of only 8.2. In HSMHA in 1971 and 1972, they managed to achieve 11.8 and 11.7, as they do in other HEW agencies. X-118 gives no clue as to deterrents to women in CDC for achieving equally high average grades.

GS685 serves also as an example of how one job series can distort a possible ratio of women: were women 50% of GS685 in CDC, then CDC's ratio of women would rise to 54% instead of the 43% it now is for the GS payscale.

Impressions

° The low ratio of women in CDC is not attributable to CDC's high percentage of all-male jobs - although this high percentage is not readily understandable.

° Nor is the low ratio attributable to an unwillingness in CDC to employ women up to the level of labor market availability, since CDC does surpass availability in more than 50% of the matched job series.

° Low ratios and low average grades may be related to the clustering of CDC's women in traditional women's support roles.

° But there is no ready explanation for higher average grades for men when men invade the traditional women's support roles.

° Nor is an explanation at hand for CDC's notable deficit in women employees (and women in higher grades) in occupations where women serve elsewhere in HEW.

Outgrowths

° The above impressions might be tested by studies of entry quallfications versus promotion rates in the following occupations:

	GS334 Computer specialist	34 employees	3.5 gradelevel gap
	GS341 Admin Officer	37 employees	2.5 gradelevel gap
	GS685 PubHlth Advisor	599 employees	2.5 gradelevel gap
	GS401 Biologist	93 employees	1.5 gradelevel gap
*	GS-1530 Statistician	28 employees	2.7 gradelevel gap

° Recruitment patterns for GS685 deserve explicit study.

*Interviews with 20 have already been made in this series.

Occupations in CDC Employing Men Only
December 1973

Occupation	Number of Employees
GS018 - SafetyMgt	2
GS085 - Guard	9
GS302 - Messenger	2
GS330 - DComptrSysAnalyst	2
GS340 - Prog Mgt	4
GS345 - Prog Analysis	5
GS405 - Pharmacology	6
GS413 - Physiology	6
GS414 - Entymology	5
GS505 - Financial Mgt	3
GS560 - BudgetAdmin	4
GS801 - GenlEngineer	4
GS803 - SafetyEngineer	2
GS855 - ElectricalEngineer	2
GS856 - ElectroTech	8
GS893 - ChemicalEngineer	2
GS1060 - Photography	7
GS1301 - GenlPhysSci	5
GS1310 - Physics	5
GS1521 - MathTech	2
(20)	(85)

Occupations in CDC Employing Women Only
December 1973

Occupation	Number of Employees
GS312 - ClerkSteno	56
GS316 - Clerk DictMach	23
GS318 - Secretary	153
GS351 - Printing Clerk	2
GS356 - Cardpunch Operator	10
GS357 - Coding	5
GS610 - Nurse	11
GS615 - PubHlth Nurse	4
GS699 - HlthAid and Tech	3
GS1087- Editorial Asst	8
GS1106 -ProcureClerk	4
GS1411 - LibTech	5
GS2132 - Travel	9
(13)	(293)
	11.3%

Percentage of Women in the U.S. Labor Force and Percentage Employed by CDC, in 28 Job Titles Common to Both, 1973

Job Title	% in U.S. Labor Force	% in CDC Workforce	relative use	number employees
Guard	5.1	0	-	9
Psychologist	38.2	25.0	-	4
Sociologist	35.4	0	-	1
Messenger	19.8	0	-	2
Mail/File Clerk	71.7	10.0	-	10
Clerk/Steno	93.7	100.	+	
Secretary	97.6	100.	+	
Clerk/Typist	94.2	96.0	+	
Computer Specialist	19.6	26.5	+	
Office Machine Opr	73.7	100.	+	
Cardpunch Opr	56.9	100.	+	
Biologist	34.9	53.8	+	
Accounting	26.0	44.4	+	
Accounting Tech	81.9	80.0	-	5
Nurse	97.3	100.	+	
MechEngineer	.9	14.3	+	
IndustEngineer	3.0	0	-	1
Photography	13.8	0	-	7
Writing/Editing	40.4	88.2	+	
Purchasing	29.5	71.4	+	
Physics	3.9	0	-	5
Chemistry	11.9	29.4	+	
Librarian	81.9	87.5	+	
LibraryTech	78.9	100.	+	

continued....

Math Tech	11.9	0	-	2
Mathematics	22.5	0	-	1
Statistician	40.8	32.1	-	28
Statistics Asst	64.3	96.7	+	
				(75) 2.9%

Titles in which CDC equals or exceeds the labor force 16

Titles in which CDC falls short of the labor force 12

Comparison: Women in CDC's 14 Largest Occupations 12/73, with the Same in HSMHA 10/71 and 10/72

Occupation	October 1971 HSM Men	Women	%	October 1972 HSM Men	Women	%	December 1973 CDC Men	Women	%	Comparison 71-73 *in % women*
GS-301 GenlClerk	413	1230	*74.9*	375	1301	*77.6*	27	140	*83.8*	*+8.9*
GS-312 Clerk/Steno	1	289	*99.7*	2	291	*99.3*	-	56	*100.*	*+ .3*
GS-318 Secretary	7	1255	*99.4*	7	1300	*99.5*	-	153	*100*	*+ .6*
GS-322 Clerk/Typist	37	838	*95.8*	50	906	*94.8*	4	97	*96.0*	*+ .2*
GS-334 ComptrSpec	112	51	*31.3*	120	55	*31.4*	25	9	*26.5*	*-4.8*
GS-341 AdminOfficer	142	88	*38.3*	151	106	*41.2*	26	11	*29.7*	*-8.6*
GS-401 Biology	52	69	*57.0*	51	69	*57.5*	43	50	*53.8*	*-3.2*
GS-403 Microbiology	109	96	*46.8*	115	99	*46.3*	108	87	*44.6*	*-2.2*
GS-404 BiologyTech	172	132	*43.4*	177	130	*42.3*	115	95	*45.2*	*+1.8*
GS-685 PubHlthProgSpec	861	84	*8.9*	896	107	*10.7*	584	15	*2.5*	*-6.4*
GS-1320 Chemistry	109	66	*37.7*	128	64	*33.3*	84	35	*29.4*	*-8.3*
GS-1530 Statistician	129	79	*38.0*	129	81	*38.6*	19	9	*32.1*	*-5.9*
GS-1531 StatAsst	15	166	*91.2*	16	157	*90.8*	2	58	*96.7*	*+5.5*
GS-1864 PhQuarInsp	198	6	*2.9*	170	5	*2.9*	84	1	*1.2*	*-1.7*
							(1122)	*(816)*		
							76.3%	*73%*		

Comparison: Average Grade of Men and Women in CDC's 14 Largest Occupations 12/73, with the Same in HSMHA 10/71 and 10/72

Occupation	October 71 HSM			October 72 HSM			December 73 CDC			Closure*
	Men	Women	Gap	Men	Women	Gap	Men	Women	Gap	
GS-301 Genl Clerk	8.9	5.8	-3.1	9.3	6.0	-3.3	10.6	6.1	-4.5	+1.4
GS-312 Clerk/Steno	4.0	4.0	-	3.5	4.3	+ .8	-	4.2	-	-
GS-318 Secretary	5.7	5.7	-	5.7	5.2	- .5	-	5.8	-	-
GS-322 Clerk/Typist	3.8	3.3	-.5	3.4	3.3	- .1	3.7	3.3	-.4	- .1
GS-334 ComptrSpec	11.7	11.2	-.5	11.0	10.7	- .3	10.5	7.0	-3.5	+3.0
GS-341 AdminOfficer	11.9	9.9	-2.0	11.8	9.5	-2.3	12.1	9.6	-2.5	- .5
GS-401 Biology	11.1	9.7	-1.4	11.0	9.9	-1.1	11.5	10.0	-1.5	- .1
GS-403 Microbiology	12.7	10.4	-2.3	12.4	10.0	-2.4	12.5	11.1	-1.4	+ .9
GS-404 BiologyTech	5.8	5.7	- .1	5.8	5.7	- .1	6.0	5.8	- .2	+ .1
GS-685 PubHlthPrgSp	11.5	11.8	+ .3	11.9	11.7	- .2	10.7	8.2	-2.5	+2.8
GS-1320 Chemistry	11.1	8.9	-2.2	10.3	9.3	-1.0	11.2	9.5	-1.7	- .5
GS-1530 Statistician	12.6	10.9	-1.7	12.7	11.0	-1.7	12.8	10.1	-2.7	+1.0
GS-1531 StatAsst	6.1	6.8	+ .7	6.3	6.5	+ .2	6.5	6.1	- .4	+1.1
GS-1864 PHQuarInsp	9.6	9.5	- .1	9.8	9.6	- .2	10.4	9.0	-1.4	+1.3

**Closure expressed in a minus value is a positive indicator for women showing that their average grade approaches that of men by the fraction of a grade noted. A plus-value closure shows that the gap has widened by the amount noted.*

The Employment of Women in FDA,

An Occupational Analysis

October 1971, October 1972, December 1973

The Federal Women's Program will analyze annually the job series most used by HEW several agencies, showing proportions of women regularly employed against the reservoir of those occupations in the national labor force.

HEW AAP II-F-1

Federal Women's Program
January 1974

CG 009 213

Two workers out of three in HEW are women.

Two workers out of five in the United States are women.

Less than two workers out of five in FDA are women - almost the lowest ratio of any HEW agency.* And FDA women work at an average of four grade-levels lower than men.

This examination of occupations in FDA attempts to answer three questions about FDA's women workers:

1. In what occupations are their numbers lower?
2. In what occupations are their grades lower?
3. What progress is being made on their behalf?

1. In what occupations are their numbers lower?

FDA employs workers in 105 different occupations.[1/] But 22 of those occupations employ no women. Hence, 21% of FDA's jobs are exclusively men's jobs. (*page 4*) That women are available for these jobs is attested by the fact that other HEW agencies employ women in all of the FDA-all-male series, except chemical engineer. *(page 5)*

In FDA's most populous job series, GS-696 Consumer Safety Officer, there are only 12% women. *(page 10)*

In the 12 predominant job series in FDA (comprising 71% of the work force, and none with fewer than 98 positions), women are more numerous than men only in the basic clerical occupations: clerk, clerk/typist, clerk/steno, secretary, and dictating machine clerk. Of the remaining 7 of the 12 occupations, women achieve 35% in none. *(page 10)*

In some occupations, women are more available in the total workforce than FDA's use of them. U.S.Census figures for women in the 30 occupations which match those in FDA [2/] show that proportions of women in

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* Only CDC has a lower ratio.

1/Occupations with more than one employee.

2/Since FDA has many unique job titles, not all FDA occupations can be compared to U.S.Census figures.

the U.S. workforce exceed proportions employed by FDA in 11 of the 30. These 11 number 237 employees. *(pages 8-9)*

FDA hires fewer than available in the series for: mail/file clerk, office machine operator, calculating machine operator, biologist, accountant, mechanical engineer, industrial engineer, librarian, library technicians, and statistician.

2. In what occupations are their grades lower?

In the 12 most populous occupations in FDA, women have a lower average grade than men in 9. Only secretaries, dictating machine clerks and physicians have a slightly higher average grade than men in the same series. *(page 11)*

Greatest differences in favor of men exist in the series for biologists, microbiologists, consumer safety officers and consumer safety inspectors.

The difference of three whole grades in consumer safety officers is the largest, and involves the largest occupation in FDA, with 1137 employees. This job series has doubled its number of employees in the past two years, and the average grade of 11 for men and 8 for women has remained the same. It appears that men continued to be brought into FDA at higher grades than women in this occupation.

For biological technicians, the average grade of men has risen by steady small increments on the three reporting dates, while for women it sharply fell until 1973.

In GS-1862, consumer safety inspector, the average grade for men rose 2.1 grades in 1973; for women it rose only 1 grade. The result constitutes the largest widening of average grade in FDA's main job series.

3. What progress is being made on their behalf?

Although there are observable areas of concern, there are more positive than negative signs of eventual equity for women in FDA.

- Although 22 occupations were exclusively male in December 1973, the number of male-exclusive jobs has decreased from 28 in 1971. Women now work in 79.1% of the occupations in FDA, compared to 70.2% two years ago. *(page 4)*

- On the other hand, women have taken exclusivity on 13 job series, 9 more than were all female in 1971. Although many of the 13 are stereotypically female, not all are. Accounts clerk, medical technologist, medical technician,

legal instruments examiner, general business, mathematics, and mathematical technician are all series where men are usually competitive. *(page 7)*

- Although FDA underemploys women in 11 of the 30 occupations matched in the U.S.Census, in 19 of those occupations it exceeds. For physicians, psychologists, chemists, mathematicians, math technicians and statistical assistants, FDA's proportions of women are notably in excess. *(pages 8-9)*

- In 5 of the 11 occupations where FDA falls short of the Census, representation of women has increased over 1971 figures.*(pp.8-9)*

- In the 12 predominant FDA job series, women exceed men in numbers in 5; these are clerical series. But in 4 of the remaining 7, women have increased in percentage since 1971.*(page 10)*

- In 4 of the 9 series where men's average grade exceeds that of women, the gap has narrowed, bringing women's average grade closer to that of men. *(page 11)*

Implications

- In spite of the facts that fewer women are employed in FDA than the labor market might supply, and that they work at average grades significantly lower than those of men, there is evidence of steady progress in FDA on behalf of women.

- Several of FDA's job series should be studied in further depth for comparable prior qualifying experience and relative promotion rates of the men and women incumbents, in order to explain the persistent differences between their average grades.

Occupations in FDA with Both Men and Women; with Only Men or Only Women, over 3 Years

	October 1971	October 1972	December 1973	Change 71 - 73
Number of Occupations	94	107	105	+11
Men and Women	62 *(66%)*	71 *(66.4%)*	70 *(67%)*	+ 8 *(+1.0%)*
Men Only	28 *(30%)*	27 *(25.2%)*	22 *(21%)*	- 6 *(-9.0%)*
Women Only	4 *(4%)*	9 *(8.4%)*	13 *(12%)*	+ 9 *(+8.0%)*

FDA Job Series Having Men Only

Series	October 1971	October 1972	December 1973
0018-SafetyMgt	x	x	x
110-Economist	x	x	x*
230-EmplMgtRel	x	x	x
330-DigComptrSysAnal	x	x	x
332-DigComptrSysOpr	x	x	
340-ProgMgt		x	
393-CommunicaSpec		x	x
410-Zoology			x
414-Entymology	x	x	x
434-PlantPath		x	x
487-Husbandry	x	x	x
505-FinancialMgt	x		x
601-HealthSci	x	x	
645-MedTech	x	x	
660-Pharmacy	x	x	
680-DentalOff	x	x	x
801-GenlEngr	x	x	x
802-EngrTech	x	x	x
810-CivilEngr	x	x	x
830-MechEngr	x		x
850-ElectEngr		x	x
855-ElectronEngr	x	x	x
856-ElectronTech	x	x	x
893-ChemEngr		x	x
896-IndEngr	x	x	x

*one employee only

continued....

FDA Job Series - Men Only

935-HearingExam	x		
954-LegalAsst	x		
1060-Photography	x		
1084-VisualInfo	x		
1087-EditorialAsst	x		
1306-HealthPhysics	x	x	x
1310-Physics	x	x	
1860-PubHlthInsp	x		
1910-QualAssur	x	x	x
2001-GenlSupply		x	
2003-SupplyMgt		x	x
	28	27	22

FDA Job Series Having Women Only

Series	October 1971	October 1972	December 1973
203-PersonnelClk			x
304-Infor Recptn	x	x	
335-ComptrAid/Tech		x	x
356-CardPunch Opr		x	
362-EAMProjPlan			x
382-TelephoneOpr		x	
520-AcctsMainClk			x
540-VoucherExam	x		x
644-MedTechnol			x
646-MedTech			x
963-LegalInstExam	x	x	x
986-LegalClerical			x
1087-EditorialAsst		x	x
1101-GeneralBusiness		x	x
1520-Mathematics	x	x	
1521-MathTech			x
2132-Travel		x	x
	4	9	13

Percentage of Women in the US Labor Force,* and Percentage Employed by FDA, in 30 Job Titles Common to Both, for 1971, 1972, 1973

Job Title	% in US Labor Force	% in FDA Labor Force 10/71	10/72	12/73	
Economist	11.2	0	0	0	-
Psychologist	38.2	-	80.0	42.9	+
Mail/File Clerk	71.7	57.4	60.5	58.9	-
Clerk/Steno	93.7	98.8	99.2	99.1	+
Secretary	97.6	98.0	98.6	98.8	+
Clerk/Typist	94.2	95.9	92.1	97.4	+
Computer Spec	19.6	18.4	17.2	27.7	+
Office Mach Opr	73.7	0	0	0	-
CalculatingMach Opr	91.3	0	0	0	-
Card Punch Opr	56.9	87.5	100.0	100.0	+
Telephone Opr	94.5	100.0	100.0	100.0	+
Biologist	34.9	20.4	23.9	25.5	-
Accountant	26.0	12.5	14.3	16.7	-
Acct Tech	81.9	88.9	90.9	81.5	=
Physician	9.2	15.0	17.4	17.6	+
Nurse	97.3	100.0	100.0	-	+
Pharmacist	11.9	0	0	25.0	+
Mech Engr	.9	0	3.6	0	-
Ind Engr	3.0	0	0	0	-
Photographer	13.8	0	0	33.3	+
Writer/Editor	40.4	66.7	53.8	66.7	+

continued.....

Purchaser	29.5	60.0	62.5	57.1 +
Physicist	3.9	0	0	4.0 =
Chemist	11.9	19.7	19.9	18.7 +
Librarian	81.9	50.0	66.7	60.0 -
Library Tech	78.9	75.0	72.7	66.7 -
Mathematician	22.5	100.0	100.0	50.0 +
Statistician	40.8	11.1	7.1	35.3 -
Math Tech	11.9		100.0	100.0 +
StatisticianAsst	64.3	84.2	81.8	84.2 +
Total titles		27	30	30
Titles in which FDA equals or surpasses US labor force		12 (44.4%)	15 (50%)	19 (63%)

* *Source: US Census of the Population, 1970*

Representation of Women in the 12 Largest Occupational Groups in FDA * on 3 Different Dates, with Changes

Occupation	October 1971			October 1972			December 1973			26-Month Change		
	Men	Women	%	Men	Women	%	Men	Women	%	Men	Women	%
GS-301 GenlClerk	148	195	*56.8*	146	223	*60.4*	142	239	*62.7*	- 6	+44	*+ 5.9*
GS-312 Clerk/Steno	1	83	*98.8*	1	131	*99.2*	1	116	*99.1*		+33	*+ .3*
GS-316 Clerk/Dict	5	157	*96.9*	7	212	*96.8*	5	169	*97.1*		+12	*+ .2*
GS-318 Secretary	6	301	*98.0*	5	343	*98.6*	4	333	*98.8*	- 2	+32	*+ .8*
GS-322 Clerk/Typ	6	139	*95.9*	19	220	*92.1*	6	230	*97.4*		+91	*+ 3.8*
GS-401 Biologist	43	11	*20.4*	70	22	*23.9*	73	25	*25.5*	+ 30	+14	*+ 5.1*
GS-403 Microbiol	138	65	*32.0*	171	77	*31.0*	168	71	*29.7*	+ 30	+ 6	*- 2.3*
GS-404 BiolTech	65	53	*44.9*	185	106	*36.4*	174	90	*34.1*	+109	+37	*-10.8*
GS-602 MedOfficer	96	17	*15.0*	100	21	*17.4*	89	19	*17.6*	- 7	+ 2	*+ 2.6*
GS-696 ConSafetyOfr	556	45	*7.5*	824	61	*16.3*	998	139	*12.2*	+442	+94	*+ 4.7*
GS-1320 Chemist	680	167	*19.7*	670	166	*19.9*	665	153	*18.7*	- 15	-14	*- 1.0*
GS-1862 ConSafetyInsp	49	9	*15.5*	161	54	*25.1*	112	35	*23.8*	+ 63	+26	*+ 8.3*

** 71.1% of FDA employees; 69.5% of the men and 73.7% of the women*

Average Grades of Men and Women in FDA's 12 Largest Occupations, on 3 Different Dates, with Closure

Occupation	October 1971 Men	Women	Gap	October 1972 Men	Women	Gap	December 1973 Men	Women	Gap	Closure in 26 months *
GS-301 GenlClerk	8.3	6.5	1.8	8.4	6.7	1.7	8.1	7.0	1.1	- .7
GS-312 Clerk/Steno	5.0	4.2	.8	5.0	4.1	.9	5.0	4.4	.6	- .2
GS-316 Clerk/Dict	4.4	4.5	.1	4.3	4.3	-	4.4	4.6	.2	+ .1
GS-318 Secretary	5.5	6.2	.7	5.8	5.6	.2	6.0	6.3	.3	- .4
GS-322 Clerk/Typ	3.2	3.0	.2	3.3	3.1	.2	3.2	3.2	-	- .2
GS-401 Biologist	11.7	10.1	1.6	11.3	9.9	1.4	11.1	9.7	1.4	- .2
GS-403 Microbiol	11.2	10.0	1.2	11.5	10.1	1.4	11.6	10.3	1.3	+ .1
GS-404 BiolTech	5.7	5.3	.4	5.9	4.9	1.0	6.0	5.5	.5	+ .1
GS-602 MedOfficer	14.7	14.9	.2	14.8	14.9	.1	14.9	15.2	.2	-
GS-696 ConSafOfr	11.1	8.1	3.0	9.2	6.3	2.9	11.1	8.1	3.0	-
GS-1320 Chemist	11.7	10.7	1.0	11.7	10.8	.9	11.8	10.9	.9	- .1
GS-1862 ConSafeInsp	5.4	5.3	.1	4.7	4.4	.3	6.8	5.4	1.4	+1.3

(Closure showing a minus value indicates that women's average grade has approached that of men by the designated fraction of a grade, and thus is a positive sign for women.*

Closure showing a plus value indicates that the gap has grown wider by the designated fraction of a grade.

STUDIES IN DISCRIMINATION

#1 - Mathematicians

As part of its charge to examine areas of possible discrimination against women in Federal service, the FWP interviewed all incumbents in HEW in four different job series during the summer of 1973.

This paper summarizes the findings applying to mathematicians (GS-1520)

Federal Women's Program/HEW
September 1973

- Thirty-nine mathematicians are employed by HEW, mostly in NIH (80%), and a total of 8 in OE, HR-HS, and FDA. *(Table 1)*

- Twenty-five of the mathematicians are men; 14 are women (36%). One mathematician in three in HEW is a woman; in the entire country, one mathematician in nine is a woman.

- Women mathematicians in HEW entered preponderantly (85%) at the lower grade levels, only 2 above GS-9. Of the men mathematicians, only 36% entered at GS-9 or below; 44% entered at GS-13 and above. *(Table 2)*

- On entering service, men had higher qualifications than women - 76% of the men had degrees beyond the bachelors; 36% had PhDs. Advanced degrees were held by only 21% of the women; all were masters; none held PhDs. *(Table 3)*

  79% of the women entered HEW service at the bachelors level.

- Bachelors-level women mathematicians are more prevalent (and masters/doctors level less prevalent) in HEW than the mathematics labor pool would provide.

  65% of the women mathematicians in the U.S. hold masters degrees; 18% hold PhDs. While professional mathematicians in the country have a ratio of 9 men to 1 woman, the women who have become mathematicians are at higher academic levels than those entering service in HEW. *(Tables 3 and 4)*

- Once in service, more men mathematicians than women appeared to seek training. None of the men with bachelors or masters on entering failed to take further training. Only men entering with the PhD tended to take no further training during their years of service.

  Only 71% of the women mathematicians took further training or further degrees. Eight of the 14 took some courses; 4 took an advanced degree. *(Table 5)*

- More women (5) than men (3) paid for their own training. More men's courses (27) than women's (9) had agency-funded training.

  Women did not claim that their requests for training had been denied; they stated that they had not requested training.

- Women mathematicians have served an average of 7.0 years to date, with 2.07 promotions occurring. For men, the average is 8.36 years, with 1.64 promotions. *(Table 6)*

° Women mathematicians received promotions on the average of one every 3.38 years; men on the average of one every 5.09 years.

° Three men and two women exceeded the promotion rate. Three men and three women failed to equal the promotion rate. *(Chart 7)*

Implications:

° HEW should examine its recruiting and outreach practices for mathematicians to assure that searches for GS-13 and above include women.

° HEW seems not to be discriminating against women in rates of promotion in mathematics.

° Women mathematicians in HEW might accelerate their promotion possibilities if they sought training to enhance their efficacy.

Table 1. Mathematicians in HEW

	OE	HR-HS	FDA	NIH	HEW total
Men	2	3	-	20	25
Women	-	2	1	11	14

Table 2.
Grade Level at Entrance, and Degree at Entrance for HEW men and women mathematicians

Entry grade	Bachelors		Masters		Doctors		Total	
	M	W	M	W	M	W	M	W
5	1	2					1	2
7	4	6		1			4	7
9	1	2	3	1			4	3
11			1				1	
12			1		3		4	
13		1	4	1	1		5	2
14			1		3		4	
15					2		2	
	6	11	10	3	9		25	14

Table 3.
Educational Levels of Men and Women Mathematicians

	In the United States*		In HEW	
	Men	Women	Men	Women
Baccalaureat	28%	17%	24%	79%
Masters Degree	47	65	40	21
Doctors degree	35	18	36	0

*Source: National Science Foundation

Table 4.
Presence of Men and Women in the Mathematics Workforce

Extent of Training	In the United States*		In HEW	
	Men	Women	Men	Women
Baccalaureat	89%	11%	35%	65%
Masters degree	85	15	77	23
Doctors degree	94	6	100	0
All levels	89	11	64	36

*Source: National Science Foundation

Table 5.

Entering Grade, Degree, and Record of Training for Men and Women Mathematicians

Entering Grade	Entering Degree	Men		Women	
		Training	Advanced Degree	Training	Advanced Degree
GS-5	B	+	+	+	+
	B			-	-
7	B	+	-	-	-
	B	+	-	+	-
	B	+	-	+	-
	B	-	+	+	-
				-	+
				-	+
	M			-	-
9	B	+	+	+	-
	B			+	-
	M	+	-	+	-
	M	+	-		
	M	+	-		
11	M	+	-		
12	M	+	-		
	P	+	-		
	P	+	-		
	P	-	-		
13	M	+	-	+	+
	M	+	-		
	M	-	+		
	M	+	-		
	P	+	-		
	B			-	-
14	M	+	-		
	P	-	-		
	P	-	-		
	P	-	-		
15	P	-	-		
	P	-	-		

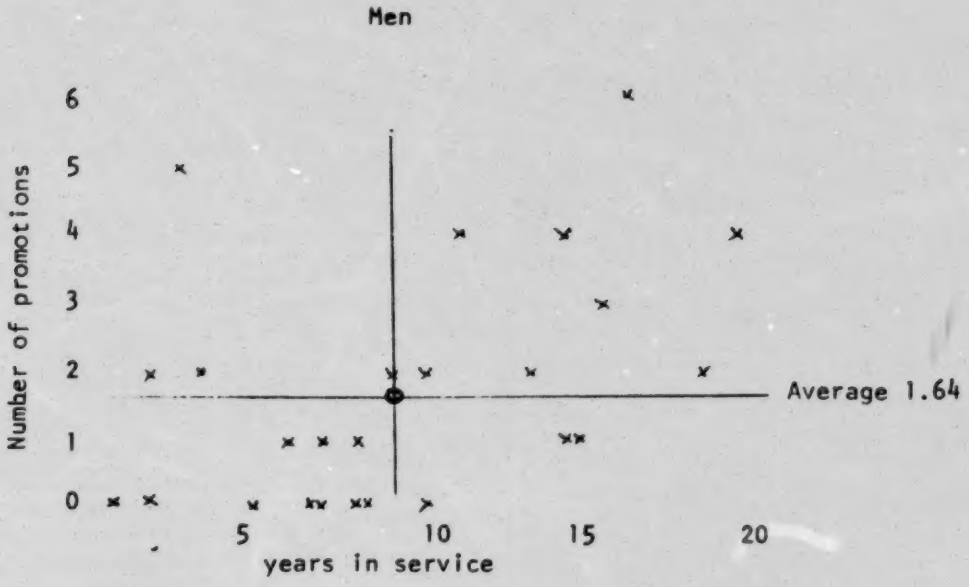
Table 6.

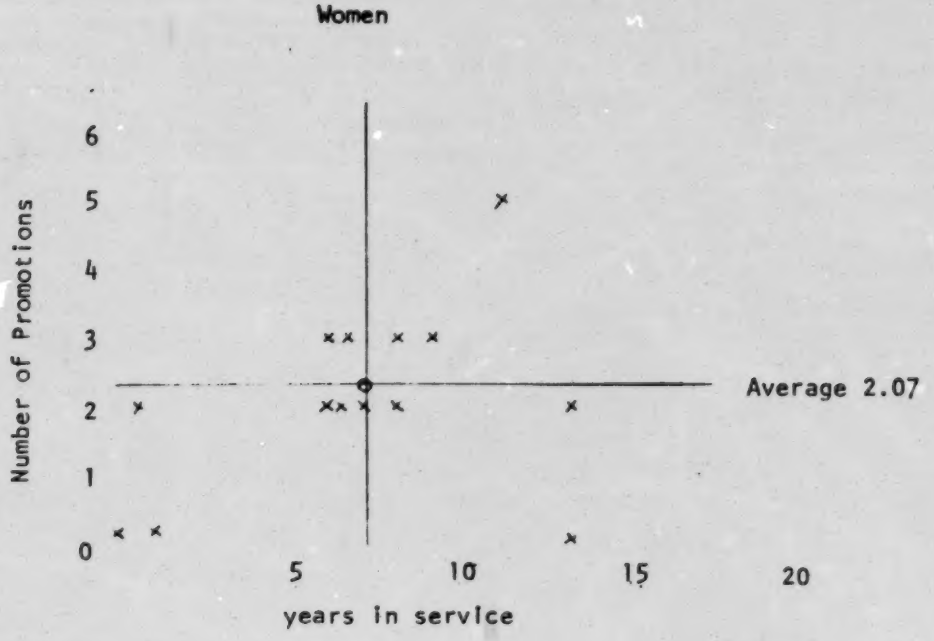
Entering Grade, Number of Years in Service, and Number of Promotions for Men and Women Mathematicians

Entering Grade	Men		Women	
	Number Years	Number Promotions	Number Years	Number Promotions
5	15	6	11	5
			6	2
7	1	0	6.5	3
	6	1	8	3
	13	4	6	3
	2	5	9	3
			8	2
			1.5	2
			1	0
9	9	2	6	2
	8	2	13	2
	12	2	7	2
	10	4		
11	3.5	2		
12	5.5	0		
	5	1		
	2	2		
	17	2		
13	2	0	13	0
	7	0	2	0
	7	1		
	13	1		
	14	3		
14	7	0		
	4	0		
	9	0		
	18	4		
15	6	0		
	13	1		
Average	8.36	1.64	7.0	2.07
Years per promotion:	5.09		3.38	

Chart 7.

Years of Service vs. Number of Promotions
for Men and Women Mathematicians





STUDIES IN DISCRIMINATION

#2 - Sociologists

As part of its charge to examine areas of possible discrimination against women in Federal service, the FWP interviewed all incumbents in HEW in four different job series during the summer of 1973.

This paper summarizes the findings applying to sociologists (GS 184)

Federal Women's Program/HEW
September 1973

- Twenty-seven sociologists are employed by HEW - 65% in HR-HA and 35% in NIH. Twenty-six of them were interviewed for this study.

- Seventeen sociologists are men; nine are women (35%). One sociologist in three in HEW is a woman; in the United States one sociologist in eleven is a woman. *(Table I)*

- There were no major differences in the entry grades of men and women sociologists. Eight of the 17 men entered at GS-12 and below; 4 of the 9 women. *(Table II)*

- On entering service, men had higher qualifications than women - 94% of the men had degrees beyond the bachelors; 76% had PhDs. Degrees beyond the bachelors were held by 77% of the women - 4 held PhDs and 3 masters. *(Table III)*

  These ratios could be expected from the proportions of men and women holding advanced degrees in sociology in the United States.

- HEW employs proportionately more women as sociologists than are available in the population - 35% in HEW compared to 23% in the entire country. The same holds true for women sociologists in the three educational levels. *(Table IV)*

- Once in service, the men have continued their education. All have completed PhDs. *(Table V)*

  Only one woman has received an advanced degree since entering Federal service, completing her thesis for the M.A.

  Four women (44%) received training not leading to a degree. Three of them entered at the GS 7/9 level. Five men (29%) received training not leading to a degree. Four were at the GS 13/14 level.

- One woman in five paid for her own training; one man in ten. Most courses were paid for by the government.

  Of those who received no training, only one man had requested it.

- Women sociologists have served an average of 3.37 years in HEW, with .55 promotions occurring. For men, the average is 8.05 years with 1.35 promotions occurring. (The low promotion rate may be a factor of the high initial entry grade - 69% of sociologists entered at GS-12 and above.) *(Table VI)*

  Women and men sociologists received promotions at the same rate - one every six years.

- Two men and one woman exceeded the promotion rate. *(Chart 1)*

Implications:

- HEW seems not to be discriminating against women sociologists in rates of promotion.
- Recruiting efforts for women sociologists at all educational levels seem to be adequate.
- Women sociologists might further their education in order to enhance their promotion possibilities.

Table I
Sociologists in HEW

	HR-HS	NIH	HEW total
Men	12	5	17
Women	5	4	9

Table II
Grade Level at Entrance, and Degree at Entrance
for HEW Men and Women Sociologists

Entry Grade	Bachelors		Masters		Doctors		Total	
	M	W	M	W	M	W	M	W
5			1				1	
7		2						2
9				2				2
11	1		2				3	
12					4	1	4	1
13				1	4	2	4	3
14					3	1	3	1
15					2		2	
total	1	2	3	3	13	4	17	9

Table III

Educational Levels of Men and Women Sociologists

	In the United States		In HEW on entering	
	Men	Women	Men	Women
Baccalaureat	10%	30%	6%	22%
Masters Degree	37	56	18	33
Doctors Degree	53	14	76	44

Table IV

Presence of Men and Women in the Sociology Workforce

	In the United States		In HEW on entering	
	Men	Women	Men	Women
Baccalaureat	68%	32%	33%	67%
Masters Degree	70	30	50	50
Doctors Degree	86	14	76	24
All levels	77	23	65	35

Table V

Entering Grade, Degree, and Record of Training for Men and Women Sociologists

Entering Grade	Entering Degree	Men		Women	
		Training	Advanced Degree	Training	Advanced Degree
5	M	-	+		
7	B			+	+
	B			+	-
9	M			+	-
	M			-	-
11	B	-	++		
	M	+	+		
	M	-	+		
12	P	-	-	-	-
	P	-	-		
	P	-	-		
	P	-	-		
13	M			-	-
	P	-	-	-	-
	P	-	-	-	-
	P	+	-		
	P	+	-		
14	P	+	-	+	-
	P	+	-		
	P	-	-		
15	P	-	-		
	P	-	-		

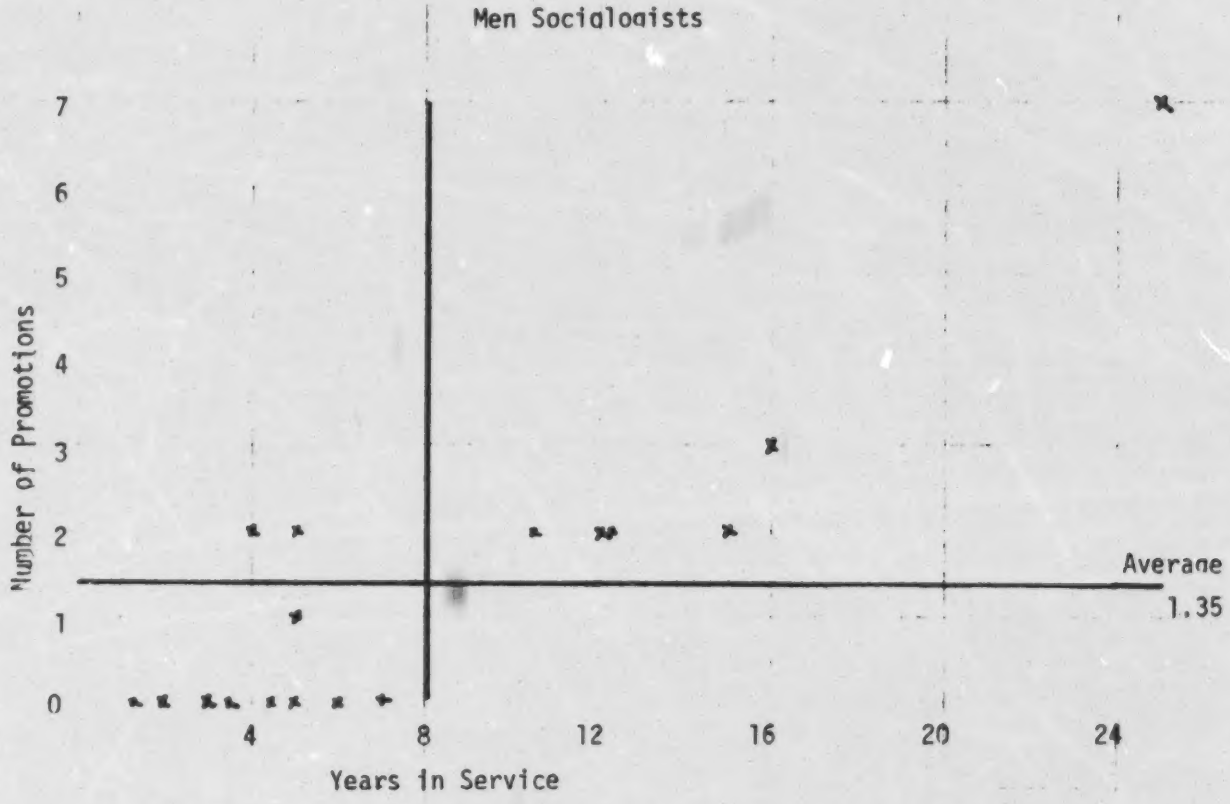
Table VI

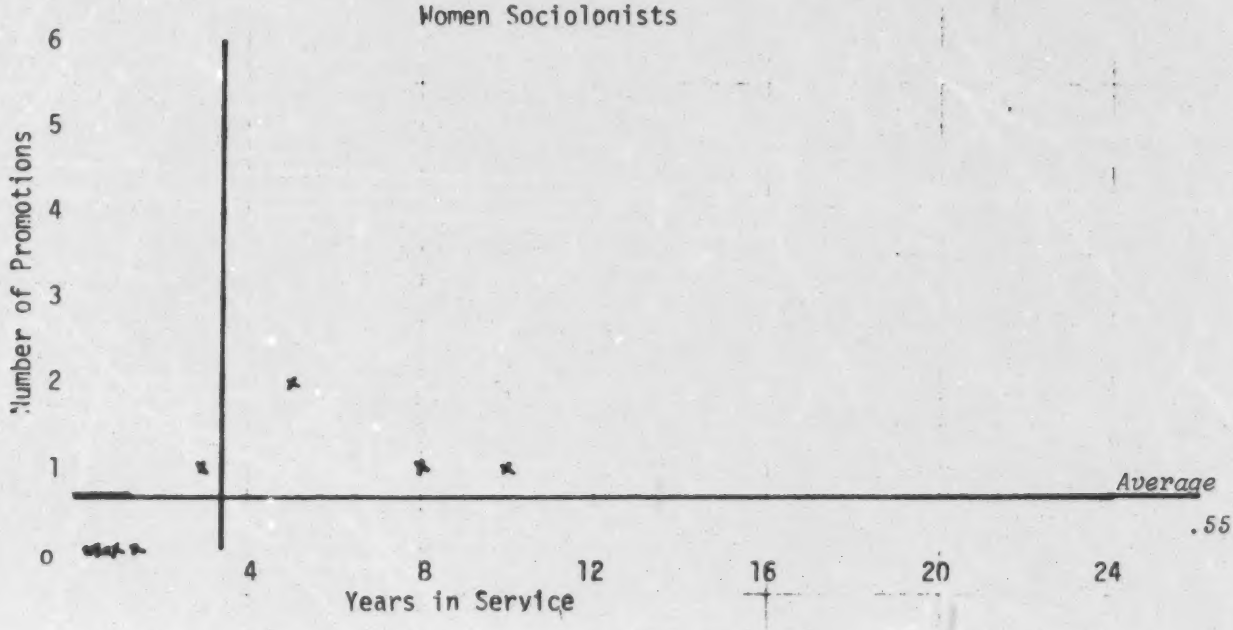
Entering Grade, Number of Years in Service and Number of Promotions for Men and Women Sociologists

Entering Grade	Men		Women	
	Number Years	Number Promotions	Number Years	Number Promotions
5	25	7		
7			.33	0
			3.	1
9			1.5	0
			5.	2
11	4	2		
	16	3		
	5	2		
12	12	2	1.	0
	7	0		
	3	0		
	6	0		
13			10.	1
	2	0	8.	1
	12	2	1.	0
	10.5	2		
	5	1		
14	1.33	0	.5	0
	3.5	0		
	15	2		
15	5	0		
	4.5	0		
Average	8.05	1.35	3.37	.55
Years per promotion	5.96		6.13	

Chart 1.

Years of Service vs. Number of Promotions
for Men and Women Sociologists





STUDIES IN DISCRIMINATION

#3 - Psychologists

As part of its charge to examine areas of possible discrimination against women in Federal service, the FWP interviewed all incumbents in HEW in four different job series during the summer of 1973.

This paper summarizes the findings applying to psychologists (GS-180)

Federal Women's Program/ HEW
September 1973

CG 009 213

- Two hundred and fifty psychologists in HEW were interviewed[1/], 224 from the GS pay schedule and 26 from ST or Ad. HS-HR employ 77% of those psychologists and NIH 14%. A total of 22 are employed by OS, OE, SSA and FDA. *(Table 1)*

- 174 are men; 76 are women (30%). Three psychologists in ten in HEW are women; in the entire country, one psychologist in four is a woman.

- Women psychologists in HEW entered preponderantly (67%) at the lower grade levels, only 28 above GS-9. Of the men psychologists, only 32% entered at GS-9 or below. *(Table 2)*

- On entering Federal service, men had higher qualifications than women - 87% of the men had degrees beyond the bachelors; 58% had PhDs. Advanced degrees were held by 59% of the women; 24% held PhDs. *(Table 3)*

  41% of the women and 13% of the men entered Federal service at the bachelors level.

- Bachelors-level women are more prevalent (and masters and doctors level less prevalent) in HEW than the national labor pool of psychologists would provide.

  49% of women psychologists in the U.S. hold masters degrees; 50% hold PhDs. While professional psychologists in the country have a ratio of 3 men to 1 woman, the women who have become psychologists are at a higher academic level than those entering service in HEW. *(Tables 3 and 4)*

- Once in service, more men psychologists than women received advanced degrees. 47% of the men, and only 26% of the women, who entered with a bachelors or masters received at least the next advanced degree.

  More women (62%)than men (53%) took courses not leading to a degree or did not complete requirements for a degree. *(Table 5a-b)*

- One man in four and about one women in three paid for their own training.

  Only two women and five men requested but did not receive training.

1/ A total of 277 employees are in GS-180; interviews were attempted with all of them, but 27 were either on extended leave or declined to participate.

- Women psychologists have served an average of 5.15 years to date, with .97 promotions occurring. For men, the average is 7.12 years, with 1.34 promotions. *(Table 6)*

- Both men and women psychologists received promotions on the average of one every 5.31 years.

Implications:

- HEW should examine its recruitment and outreach practices for psychologists to assure that searches for psychologists at the masters and doctoral levels include women.

- HEW seems not to be discriminating against women in rates of promotion in psychology.

- Women psychologists in HEW might accelerate their promotion possibilities if they concentrated their training efforts on completing advanced degrees.

Table 1. Psychologists in HEW

	HEW	OS	OE	HR-HS	SSA	FDA	NIH
Men	174	-	3	134	7	4	26
Women	76	5	-	58	1	2	10

Table 2.
Grade Level at Entrance, and Degree at entrance for HEW Men and Women Psychologists

Entry grade	Bachelors		Masters		Doctors		Total	
	M	W	M	W	M	W	M	W
4	1	2	4	2			5	4
5	9	17	3	1	1		13	18
6					2		2	0
7	8	8	11	2	1		20	10
9	2	4	11	14	2	1	15	19
11	3		11	3	24	4	38	7
12			6	4	23	4	29	8
13			4		28	5	32	5
14				1	13	1	13	2
15					7	3	7	3
total	23	31	50	27	101	18	174	76

Table 3.
Educational Levels of Men and Women Psychologists

Educational level	In the United States*		In HEW, on entering	
	Men	Women	Men	Women
Baccalaureat	1%	1%	13%	41%
Masters Degree	27	49	29	35
Doctors Degree	72	50	58	24

*Source: National Science Foundation

Table 4.
Presence of Men and Women in the Psychology Workforce

Extent of Training	In the United States*		In HEW, on entering	
	Men	Women	Men	Women
Baccalaureat	74%	26%	43%	57%
Masters Degree	63	37	65	35
Doctors Degree	82	18	85	15
All levels	76	24	70	30

*Source: National Science Foundation

Table 5 a.

Entering Grade, Degree, and Award of Advanced Degree after entering, for Men and Women Psychologists

Entering Grade	Bachelors				Masters				Doctorate			
	Men		Women		Men		Women		Men		Women	
	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no
4		1	2		1	3		2				
5	3	6	1	16	2	1	1			1		
6										2		
7	6	2	3	5	6	5	1	1		1		
9	1	1		4	9	2	2	12		2		1
11	2	1			3	8	3			24		4
12					1	5	1	3		23		4
13						4				28		5
14							1			13		1
15										7		3
total	12	11	6	25	22	28	9	18		101		18

Table 5 b.
Entering Grade, Degree and Presence of some Formal Training after Entering, for Men and Women Psychologists

Entering Grade	Bachelors				Masters				Doctorate			
	Men		Women		Men		Women		Men		Women	
	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no
4		1	1	1		4	2					
5	3	6	10	7		3	1			1		
6										2		
7	2	6	8		10	1	2		1			
9	2		1	3	6	5	11	3	1	1		1
11		3			9	2	1	2	13	11	4	
12					5	1		4	13	10	3	1
13					2	2			14	14	1	4
14							1		5	8	1	
15									6	1	2	1
total	7	16	20	11	32	18	18	9	53	48	11	7

Table 6.

Entering Grade, Average Number of Years in Service, and Number of Promotions for Men and Women Psychologists

	Entering Grade	Years in Service	Number of Promotions 0	1	2	3	4	5	6	Total # in Grade
MEN										
	4	5.	5							5
	5	69.	7	3	1	2				13
	6	2.	2							2
	7	180.75	4		3	2	2	5	4	20
	9	73.25	7	2	3	2	1			15
	11	286.	14	8	4	7	5			38
	12	253.75	9	6	4	10				29
	13	244.25	17	6	7		1	1		32
	14	78.25	12	1						13
	15	46.50	5		2					7
Average service		7.12								
Average promotions				1.34						
Years per promotion		5.31								
WOMEN										
	4	5.50	4							4
	5	65.25	7	6	3	2				18
	7	54.	5	2	1		1	1		10
	9	88.50	11	4	1	2		1		19
	11	59.	1	2	1	2	1			7
	12	46.	5		3					8
	13	32.50	1	3	1					5
	14	22.	1	1						2
	15	18.50	3							3
Average service		5.15								
Average promotions				.97						
Years per promotion		5.31								

STUDIES IN DISCRIMINATION

#4 - Social Workers

As part of its charge to examine areas of possible discrimination against women in Federal service, the FWP interviewed all incumbents in HEW in four different job series during the summer of 1973.

This paper summarizes the findings applying to social workers (GS-185)

Federal Women's Program/ HEW
September 1973

- Two hundred and eleven social workers were interviewed [1/] for this study. Most were in HR-HS (73%); 42 were in SRS, and a total of 16 in OS and NIH. *(Table 1)*

- One hundred and four social workers were men; 107 were women - (51%). One social worker in two in HEW is a woman; in the entire country, three social workers in 5 are women.

- One hundred and seven of the HEW social workers are located in regional offices - 66 men and 41 women (38%). Social workers in headquarters offices are 63% women.

- Women social workers in HEW entered at the lower grade levels, 60% at GS-9 and below. Only 41% of the men social workers entered at GS-9 and below; at headquarters, 39% of the men and 68% of the women were GS-9 or below on entering. *(Table 2)*

- On entering Federal service, men and women had essentially the same academic qualifications (masters). Five men and eleven women had only bachelors degrees; only two men had PhDs.

- Of social workers entering with a masters degree, women at most entry grade levels had significantly more prior experience than did men. *(Table 5)*

- Bachelors-level women social workers are slightly more prevalent (and masters and doctoral levels slightly less prevalent) in HEW than the labor pool would provide. 94% of women social workers in the United States hold masters degrees; 90% of those in HEW. Professional social workers in the country have a ratio of 2 men to 3 women, and have a higher academic level than those entering HEW. *(Tables 3 and 4)*

- Once in service, more women (16) pursued advanced degrees than did men (8). All but two of the women completed their MSW. Three men and seven women received a degree or certificate past the MSW after they entered service. *(Table 6)*

  84% of the men and 70% of the women received training not leading to a degree.

- 21% of the women paid for their courses; 14% of the men.

- Of those not receiving training, 5 out of 9 men had requested it; 3 out of 13 women.

1/ 228 incumbents are in GS-185; 14 were on extended leave and 3 declined to participate.

- Women social workers have served an average of 9.96 years to date, with 1.38 promotions occurring. For men, the average is 7.52 with 1.36 promotions. This discrepancy is not apparent in headquarters where promotion rates for men and women are nearly identical *(Table 7)*.

  But in the regions, men have received one promotion every 4.56 years, and women one every 8.27 years. *(Table 7-a)*. The slow regional promotion rate for women serves to lower the average HEW rate.

- Promotion rates for social workers of both sexes, in headquarters and in the regions, are almost identical - one every 6.49 (headquarters) and every 6.30 years (regions).

Implications:

- For whatever reasons, women MSW social workers are not recruited for the regions in proportion to their national availability. Men MSWs in the regions far outnumber women - 62 to 36.

- Although HEW social workers have received promotions on the average of every six and a half years, men in the regions are promoted much faster than that, and women much more slowly.

  Managers should assure that all eligible social workers are considered for promotion. Women social workers in the regions should apply for promotions and should ascertain why they are being passed over.

- Managers and personnellists should assure that assignment of entry grades does not discriminate against women.

Table 1.
Social Workers in HEW

	OS	HR-HS	SRS	NIH	total
Men	2	75	27		104
Women	5	78	15	9	107
Hdqtrs Men	1	19	18		38
Women	4	44	9	9	66
Region Men	1	56	9		66
Women	1	34	6		41

Table 2.
Grade level at Entrance, and Degree at Entrance
for HEW Men and Women Social Workers

Entry Grade	Bachelors		Masters		Doctors		total	
	M	W	M	W	M	W	M	W
5		1	1	4			1	5
7	2	4	8	9			10	13
8		2		1				3
9	3	2	29	41			32	43
10			1	3			1	3
11		1	13	17			13	18
12		1	17	3			17	4
13			19	15	2		21	15
14			5	2			5	2
15			4	1			4	1
total	5	11	97	96	2		104	107

Table 2 - b.

Grade Level at Entrance and Degree at Entrance for Social Workers in the Regions

Entry Grade	Bachelors		Masters		Doctors		Total	
	M	W	M	W	M	W	M	W
5				1				1
7	1	1	5	4			6	5
8		1						1
9	3	1	19	11			22	12
10			1	2			1	2
11		1	12	7			12	8
12		1	13	1			13	2
13			8	8			8	8
14			3	2			3	2
15			1				1	
total	4	5	62	36			66	41

Table 2-c.

Grade Level at Entrance and Degree at Entrance for Social Workers in Hdqtrs

Entry Grade	Bachelors		Masters		Doctors		Total	
	M	W	M	W	M	W	M	W
5		1	1	3			1	4
7	1	3	3	5			4	8
8		1		1				2
9		1	10	30			10	31
10				1				1
11			1	10			1	10
12			4	2			4	2
13			11	7	2		13	7
14			2				2	
15			3	1			3	1
total	1	6	35	60	2		38	66

Table 3.

Educational Levels of Men and Women Social Workers

	In the United States		In HEW, on entering	
	Men	Women	Men	Women
Baccalaureat	5%	5%	5%	10%
Masters Degree	93	94	93	90
Doctors Degree	2	1	2	-

Table 4.

Presence of Men and Women in the Socialwork Labor Pool

	In the United States		On HEW, on entering	
	Men	Women	Men	Women
Baccalaureat	39%	61%	31%	69%
Masters Degree	39	61	50	50
Doctors Degree	57	43	100	-
All levels	39	61	49	51

Table 3-a
Educational Levels of Men and Women Social Workers
in the U.S. and in HEW Regions

	In the United States		In HEW Regions (entry)	
	Men	Women	Men	Women
Baccalaureat	5%	5%	6%	12%
Masters Degree	93	94	94	88
Doctors Degree	2	1	-	-

Table 4-a

Presence of Men and Women in the Socialwork Labor Pool
in the U.S. and in HEW Regions

	In the United States		In HEW Regions (entry)	
	Men	Women	Men	Women
Baccalaureat	39%	61%	44%	56%
Masters Degree	39	61	63	37
Doctors Degree	57	43	-	-
All levels	39	61	62	38

Table 3-b
Educational Levels of Men and Women Social Workers in the U.S. and in HEW Headquarters

	In the United States		In HEW Hdqtrs, on entry	
	Men	Women	Men	Women
Baccalaureat	5%	5%	3%	9%
Masters Degrees	93	94	92	91
Doctors Degrees	2	1	5	-

Table 4-b
Presence of Men and Women in the Socialwork Labor Pool in the U.S. and in HEW Headquarters

	In the United States		In HEW Hdqtrs, on entry	
	Men	Women	Men	Women
Baccalaureat	39%	61%	14%	86%
Masters Degrees	39	61	37	63
Doctors Degrees	57	43	100	-
All levels	39	61	37	63

Table 5.
Qualifications Standards (X-118) and Presented Qualifications at Entry for Men and Women Social Workers

Entry Grade	X-118	Average Prior Experience and Degree					
		Bachelors		Masters		Doctors	
		M	W	M	W	M	W
5			0	1.50	.37		
7	MSW	7.50	.75	4.18	3.97		
8			6.		3.		
9	MSW + 1 yr	3.	2.25	3.71	4.37		
10				2.	6.67		
11	MSW + 2 yrs		18.	6.46	10.29		
12	MSW + 3 yrs		12.	9.06	11.67		
13				12.84	20.50	5.	
14				14.80	15.50		
15				10.37	2.00		

(The 11 women and 5 men entering with a bachelors degree did not qualify by the X-118. If experience were substituted for education, the women entering at GS-7 and GS-9 were under-qualified.)

Table 6.
Entering Grade, Entering Degree, and Record of Further Training for Men and Women Social Workers

Entry Grade	Men						Women					
	Bachelors		Masters		Doctors		Bachelors		Masters		Doctors	
	Trn	Degree	Trn	Degree	Trn	Degree	Trn	Degree	Trn	Degree	Trn	Degree
5			1				1	1	3			
7	2	2	8				3	3	7	3		
8							1	2				
9	3	3	24				1	2	28	3		
10				1					2	1		
11			11	1			1		11			
12			14	1				1	2			
13			16		2				11			
14			3						2			
15			3						1			
total	5	5	80	3	2		7	9	67	7		
Paid by												
self		4	8	1			1	6	8	4		
gov't	5	1	72	2	2		6	3	59	3		

Table 7.
Promotion Rates of Men and Women Social Workers
in HEW Headquarters

	Entry Grade	Years in Service	Number of Promotions 0	1	2	3	4	5	6	Number of employees
MEN	5	23.0							1	1
	7	64.0					2	2		4
	9	45.75	2	4	3	1				10
	11	13.0				1				1
	12	51.0	1	2		1				4
	13	115.25	7	5	1					13
	14	4.75	2							2
	15	13.50	3							3
	total	330.25	15	11	8	9	8	10	6	38
	av. yrs	8.69								
	av. promotions				1.37					
	yrs per promotion				6.34					
WOMEN	5	52.				1	1	2		4
	7	106.50			4	3		1		8
	8	7.75		1		1				2
	9	217.75	12	10	3	5	1			31
	10	9.0			1					1
	11	96.0	5	3	1	1				10
	12	19.0	1	1						2
	13	83.75	5	2						7
	15	3.0	1							1
	total	594.75	24	17	18	33	8	15		66
	av. yrs.	9.01								
	av. promotions				1.38					
	yrs per promotion				6.53					

Table 7-a.
Promotion Rates of Men and Women Social Workers
in HEW Regions

	Entry Grade	Years in Service	Number of Promotions 0	1	2	3	4	5	Number of Employees
MEN	5								
	7	81.0				2	3	1	6
	9	148.75	3	5	10	3	1		22
	10	7.0			1				1
	11	77.0	2	7	1	2			12
	12	51.75	11	1	1				13
	13	76.0		7	1				8
	14	7.0	3						3
	15	3.0	1						1
	total	451.50	20	20	28	21	16	5	66
	av. yrs	6.84							
	av. promotions			1.50					
	yrs per promotion			4.56					
WOMEN	5	13.0						1	1
	7	118.0			2	2	1		5
	8	3.0		1					1
	9	158.5	2	2	5	3			12
	10	14.5		2					2
	11	70.0	3	2	3				8
	12	40.0		1	1				2
	13	45.5	6	1	1				8
	14	9.0	2						2
	total	471.5	13	9	24	15	4	5	41
	av yrs	11.5							
	av promotions			1.39					
	yrs per promotion			8.27					

STUDIES IN DISCRIMINATION

#5 - Statisticians

As part of its charge to examine areas of possible discrimination against women in Federal service, the FWP interviewed all incumbents in five different job series in late summer of 1973.

This paper summarizes the findings applying to statisticians (GS - 1530)

Federal Women's Program/HEW
November 1973

- 373 statisticians were interviewed for this study.[1/] The largest numbers were in HRA (33%); NIH (21%); and SSA (14%). *(Table 1)*

- 246 of the statisticians interviewed were men; 127 were women (34%). In HEW, one statistician in three is a woman. U.S. census figures show two statisticians in five as women; NSF figures show one in nine.

- Of the 124 statisticians who work in HRA, 39% are women. OE employs the lowest ratio of women as statisticians - one in seven. OS and ADAMHA employ the highest ratios: one in two.

- Women statisticians entered at comparatively low grade levels - 76% entered at GS-9 and below. 57% of the men entered at GS-9 and below.

  76% of the men and 90% of the women who entered at the bachelors level entered at GS-9 and below. Men had an average of .93 years of prior experience; women .74 years. *(Table 2)*

  39% of the men and 63% of the women entering at the masters level entered at GS-9 and below. Men had an average of 1.98 years prior experience; women .85 years.

- On entering this job series, men and women had comparable academic backgrounds. 40% of the men and 40% of the women had completed at least their masters. 5% of the men and 3% of the women had only highschool diplomas. *(Table 3)*

- Compared with U.S. census figures, men and women with masters and PhDs are more prevalent in HEW than the national labor pool of statisticians would provide.

  Compared with NSF figures which show that 80% of the men and 78% of the women statisticians have at least a masters, HEW falls short on higher degrees. In HEW, 40% of the men and 39% of the women entered with a masters or doctors degree.

  Census figures show that women statisticians are slightly more prevalent in the workforce than in HEW. Their academic backgrounds are similar. *(table 4)*

- Once in service, more men statisticians than women received advanced degrees. 21% of the men and only 12% of the women who did not have a PhD on entering received at least the next advanced

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1/ 400 incumbents were in GS-1530; 5 were on extended leave; 12 declined to participate; 10 could not be contacted.

degree.

- 83% of the women and 85% of the men took courses not leading to a degree, or did not complete requirements for a degree. *(Table 5)*

- One man in five and about 2 women in 11 paid for their own training.

  Only 8 women and 6 men requested but did not receive training.

- Women statisticians have served an average of 8.37 years to date, with 2.38 promotions occurring. For men, the average is 10.9 years with 2.89 promotions. *(Table 6)*

- Men received promotions on the average of one every 3.77 years; women received one promotion every 3.52 years.

Implications:

- No discrimination is evident in HEW in GS-1530.

Table 1.
Statisticians in HEW

	Men		Women		% women	Total	
	Hdq	Regions	Hdq	Regions		Hdq	Regions
OS	3	-	3	-	50%	6	-
OE	12	-	2	-	14	14	-
HSA	11	6	6	-	26	17	6
SSA	44	-	9	-	17	53	-
SRS	5	2	4	-	36	9	2
FDA	11	-	5	-	31	16	-
HRA	69	7	48	-	39	117	7
NIH	43	3	29	4	42	72	7
ADAMHA	11	3	13	-	48	24	3
CDC	2	14	1	3	20	3	17
HEW	211	35	120	7	34	331	42

Table 2

Grade Level at Entrance, and Degree at Entrance
for HEW Men and Women Statisticians

Entry Grade	Highschool+		Bachelors		Masters		Doctors		Total	
	M	W	M	W	M	W	M	W	M	W
GS- 2	1								1	
3	1			4					1	4
4				1						1
5	4		59	26	4	1			67	27
7	1		34	28	10	11	1		46	39
9	1	2	11	8	14	15		1	26	26
11	1	2	10	4	6	8	4	1	21	15
12			8	1	16	4	7	2	31	7
13			10	1	9	3	10	2	29	6
14	3		3	1	9	1	3		18	2
15			1		3		2		6	
Total	12	4	136	74	71	43	27	6	246	127
	5%	*3%*	*55%*	*58%*	*29%*	*34%*	*11%*	*5%*		
		25%		*35%*		*38%*		*18%*		

Table 3

Educational Levels of Men and Women Statisticians

	In the U.S.* Men	In the U.S.* Women	In the U.S.** Men	In the U.S.** Women	In HEW, on entering Men	In HEW, on entering Women
High School	-	-	38%	64%	5%	3%
Baccalaureat	17	22	29	24	55	58
Masters Degree	41	59	} 33	} 12	29	34
Doctors Degree	42	19			11	5

**Source: National Science Foundation*
***Source: U.S. Census-1970*

Table 4

Presence of Men and Women in the Statisticians Workforce

	In the U.S.* Men	In the U.S.* Women	In the U.S.** Men	In the U.S.** Women	In HEW, on entering Men	In HEW, on entering Women
High School	-	-	46%	54%	75%	25%
Baccalaureat	89	11	65	35	65	35
Masters Degree	84	16	} 80	} 20	62	38
Doctors Degree	95	5			82	18
All levels	89	11	60	40	66	34

**Source: National Science Foundation*
***Source: U.S. Census-1970*

Table 5

Entering Grade, Degree, and Record of Training
for Men and Women Statisticians

	Entering Grade	High School Trn	High School Degree	Bachelors Trn	Bachelors Degree	Masters Trn	Masters Degree	Doctors Trn	Doctors Degree
MEN	2		1						
	3	1	1						
	5	2	2	57	13	4			
	7	1		32	3	8	3	1	
	9	1		7	4	13	6		
	11	1		10	1	5	1	3	
	12			8	4	15	4	3	
	13			9		7	2	8	
	14	2		2		5		1	
	15			1		3	1		
	TOTAL	8	4	126	25	60	17	16	
	PAID BY								
	SELF	1	2	23	7	10	7		
	GOV'T	7	2	103	18	50	10	16	
WOMEN	3			4	1				
	5			23	5	1			
	7			23	3	9			
	9	2		8		13	1		
	11	2		3	2	7			
	12			1		4	2	1	
	13					2			
	14			1		1			
	TOTAL	4		63	11	37	3	1	
	PAID BY								
	SELF	4		13	2	2	1		
	GOV'T			50	9	35	2	1	

Table 6

Entering Grade, Average Number of Years in Service, and Number of Promotions for Men and Women Statisticians

	Entering Grade	Years in Service	0	1	2	3	4	5	6	7	8	9	Total # in Grade
MEN	2	20.									1		1
	3	20.										1	1
	5	893.75	3	4	4	1	6	16	21	12			67
	7	629.	4	2	3	9	9	13	5	1			46
	9	319.	1	5	2	9	4	3	2				26
	11	167.5	6	3	5	3	3	1					21
	12	276.	8	8	7	7	1						31
	13	187.5	16	8	4	1							29
	14	142.	11	6	1								18
	15	26.75	6										6
Average Service		10.90											
Average Promotions					2.89								
Years per Promotion		3.77											
WOMEN	3	86.					1		2		1		4
	4	19.					1						1
	5	265.	3	2	4	5	5	2	5	1			27
	7	304.	4	9	5	5	14	2					39
	9	186.25	2	9	7	5	2	1					26
	11	102.25	3	7	2	3							15
	12	61.5	2	2	3								7
	13	27.	5		1								6
	14	11.5	1	1									2
Average Service		8.37											
Average Promotion					2.38								
Years per Promotion		3.52											

Table 6a

Average Years of Service, Average Promotions and Years per Promotion of Men and Women Statisticians in HEW Agencies

	MEN			WOMEN		
AGENCY	AV. YRS.	AV. PROM.	YRS PER PROMOTION	AV. YRS.	AV. PROM	YRS PER PROMOTION
OS	12.00	4.00	3.00	14.67	4.67	3.14
OE	8.75	1.92	4.56	16.00	6.50	2.46
HSA	12.53	2.94	4.26	4.00	1.50	2.67
SSA	10.35	3.09	3.35	5.81	2.11	2.75
SRS	10.29	2.43	4.23	13.12	2.50	5.25
FDA	14.45	3.64	3.97	6.40	1.80	3.55
HRA	9.63	3.05	3.16	6.87	2.42	2.84
NIH	12.56	2.63	4.78	10.09	2.06	4.90
ADAMHA	12.57	3.14	4.00	9.31	2.54	3.66
CDC	9.69	2.18	4.44	10.50	2.75	3.82
DHEW	10.90	2.87	3.80	8.37	2.32	3.61